



TAYLOR ENGINEERING, INC.



NORTHEAST FLORIDA  
REGIONAL COUNCIL

# Curating Community Conversations for a Resilient Future



Michelle Vieira  
September 2019

# Motivation: Radical Inclusiveness

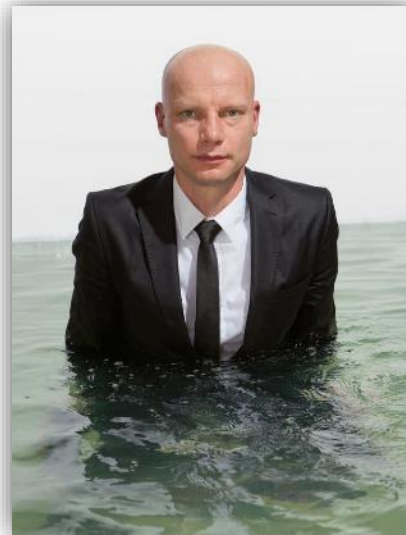
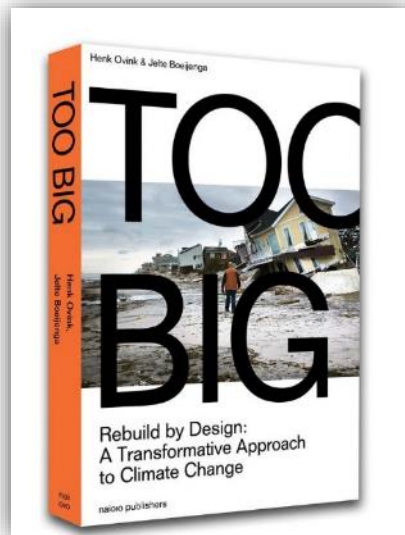
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“The strongest solutions come from those who know their communities best:  
**THE RESIDENTS**”

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“RADICAL INCLUSIVENESS”

Henk Ovink



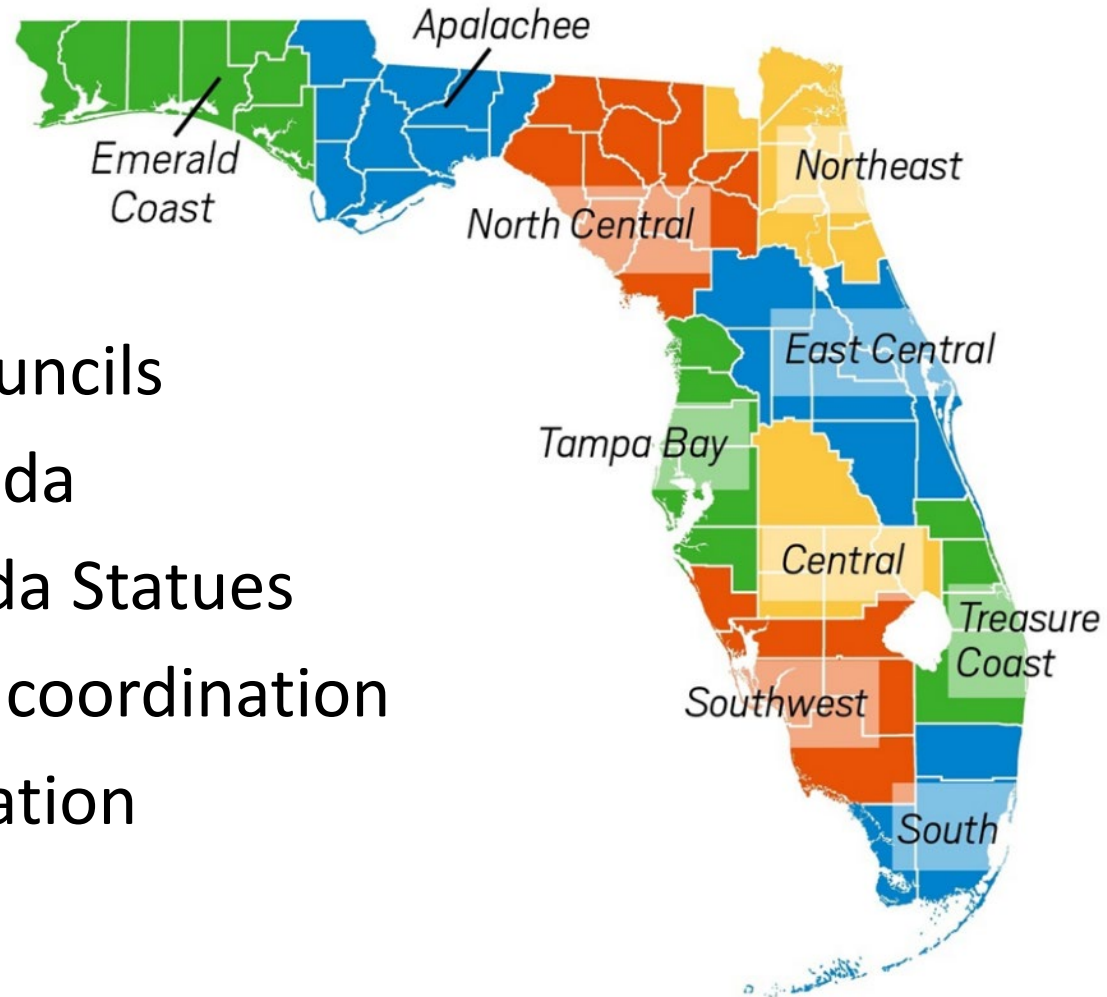
# Motivation: What Constrains Adaptation?

CONSTRAINT	DEFINITION
Technological Limit	No adaptation options are available today to reach a given adaptation goal.
Economic Barrier	Adaptation constitutes a net monetary loss.
Financing Barrier	No or limited access to finance.
Social Conflict Barrier	Stakeholder's conflicting interest impede or exacerbate adaptation.

Richard Nicholls  
Head of Tyndal Centre for Climate Change Research

# Project Overview

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## Regional Planning Councils

- A total of 10 in Florida
- Authorized by Florida Statutes
- Promote area-wide coordination
- Encourage collaboration

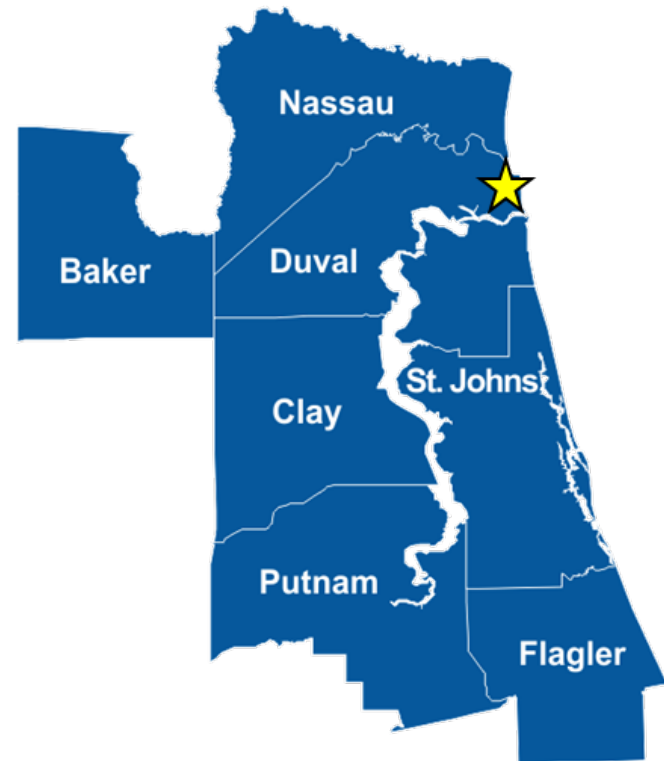
# Project Overview

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## ***Bringing Communities Together***

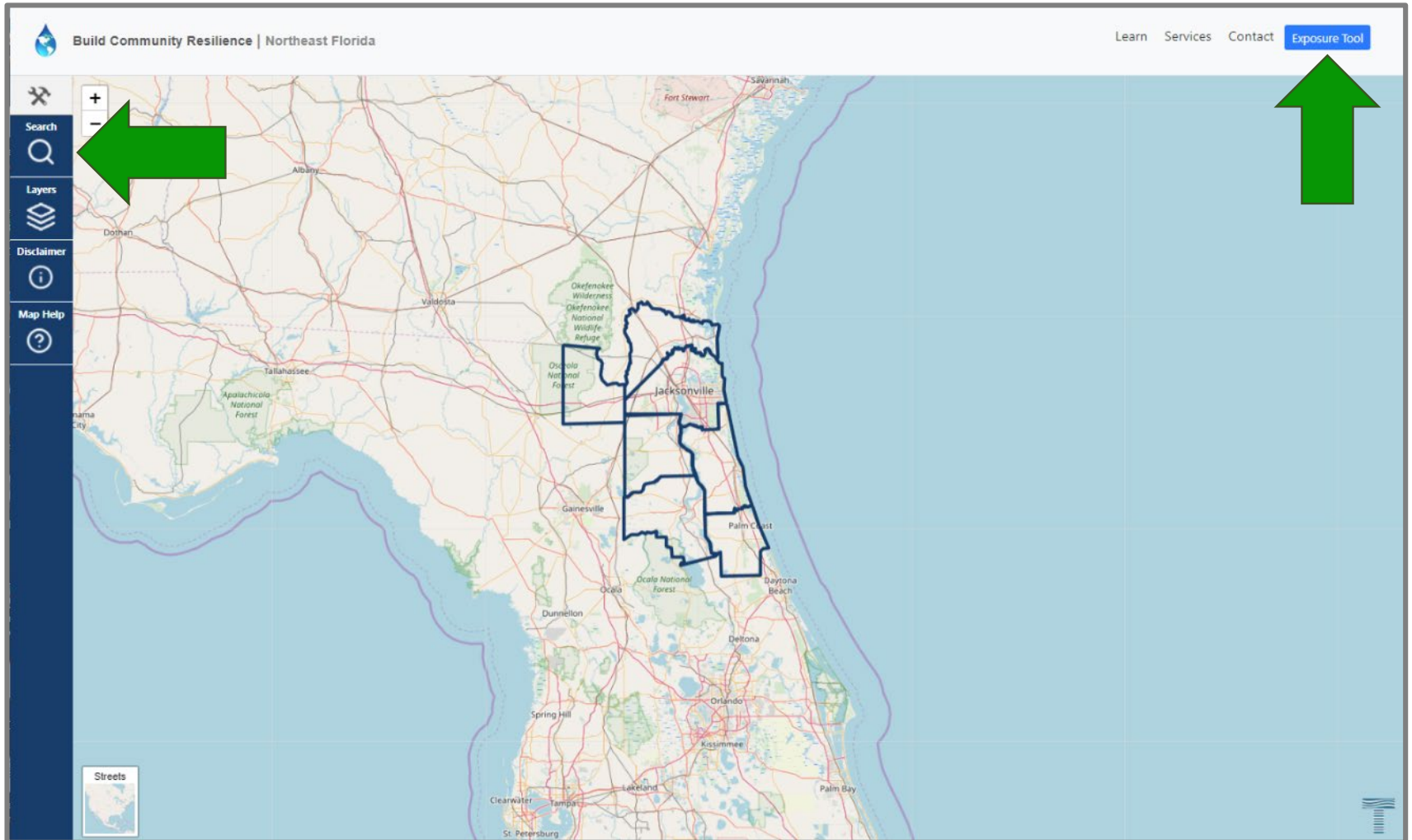
**NEFRC or "Council" was created by an interlocal agreement between Baker, Clay, Duval, Flagler, Nassau, Putnam and St. Johns Counties in 1977**

- Regional Flood Exposure Analysis
- Regional Resilience Exposure Tool
- Regional Online Survey
- Community Conversations
- Education and Resources



# Regional Resilience Website

<http://buildcommunityresilience.com/northeastflorida/>



# Regional Resilience Exposure Tool (R2ET)

The screenshot displays the R2ET web application interface. At the top left, the header reads "Build Community Resilience | Northeast Florida". On the top right, there are navigation links for "Learn", "Services", "Contact", and a blue button labeled "Exposure Tool".

The main interface is divided into a left sidebar and a central map area. The sidebar contains several menu items: "Search" (with a magnifying glass icon), "Layers" (with a stack of layers icon), "Disclaimer" (with an information icon), and "Map Help" (with a question mark icon). The "Search" section is expanded, showing the following text: "Enter the full address to search including address, city, state and zip code. For example: 117 West Duval St, Jacksonville, FL, 32202:". Below this text is a search input field with the placeholder text "Search by Address" and a search button (magnifying glass icon). A large green arrow points from the search button towards the map area.

The central map area shows a map of Northeast Florida with a blue outline highlighting a specific region around Jacksonville. The map includes labels for various cities and locations such as Albany, Valdosta, Tallahassee, Gainesville, Ocala, Dunedin, Spring Hill, Clearwater, Tampa, St. Petersburg, Lakeland, Kissimmee, Orlando, Daytona Beach, Palm Bay, and Palm Coast. It also shows natural features like the Ocala National Forest, Okefenokee National Wildlife Refuge, and Apalachicola National Forest. A "Streets" inset map is visible in the bottom left corner of the map area.

# Regional Resilience Exposure Tool (R2ET)

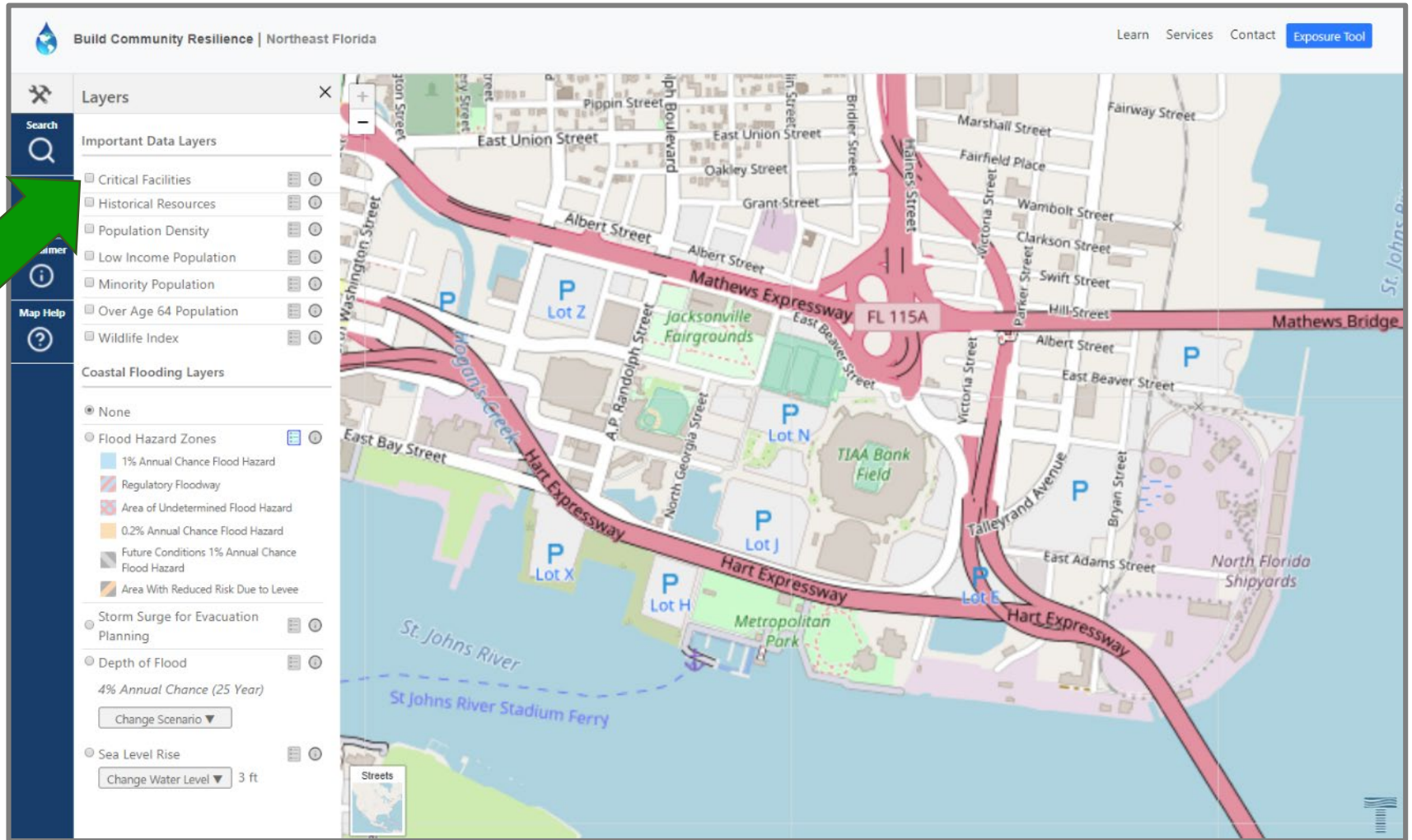
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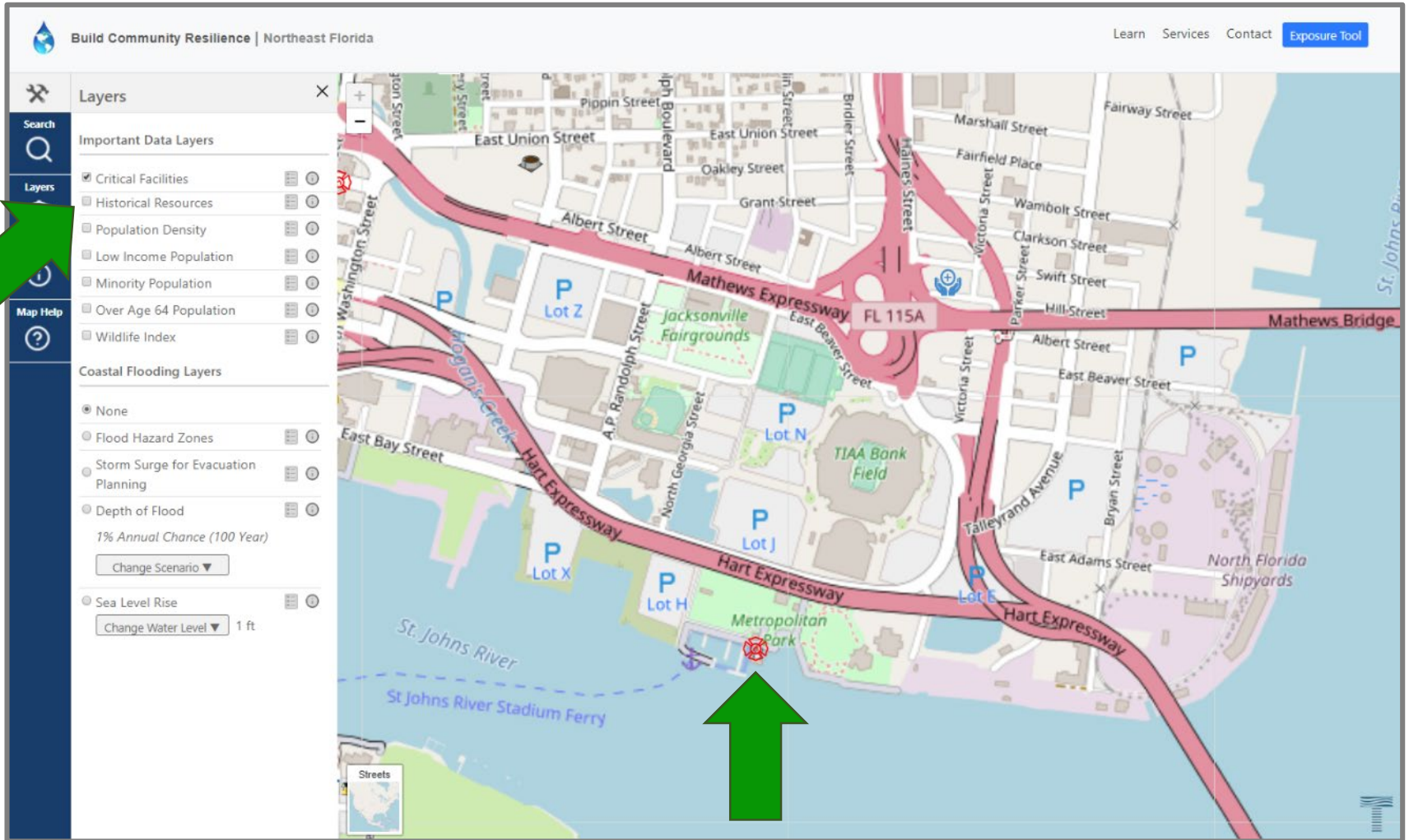
The main area is a map of Jacksonville, Florida, showing streets like Mathews Expressway (FL 115A), Hart Expressway, and the St. Johns River. A tiger logo is overlaid on the map, with a green arrow pointing to it. The map also shows various landmarks like Jacksonville Fairgrounds and Metropolitan Park.



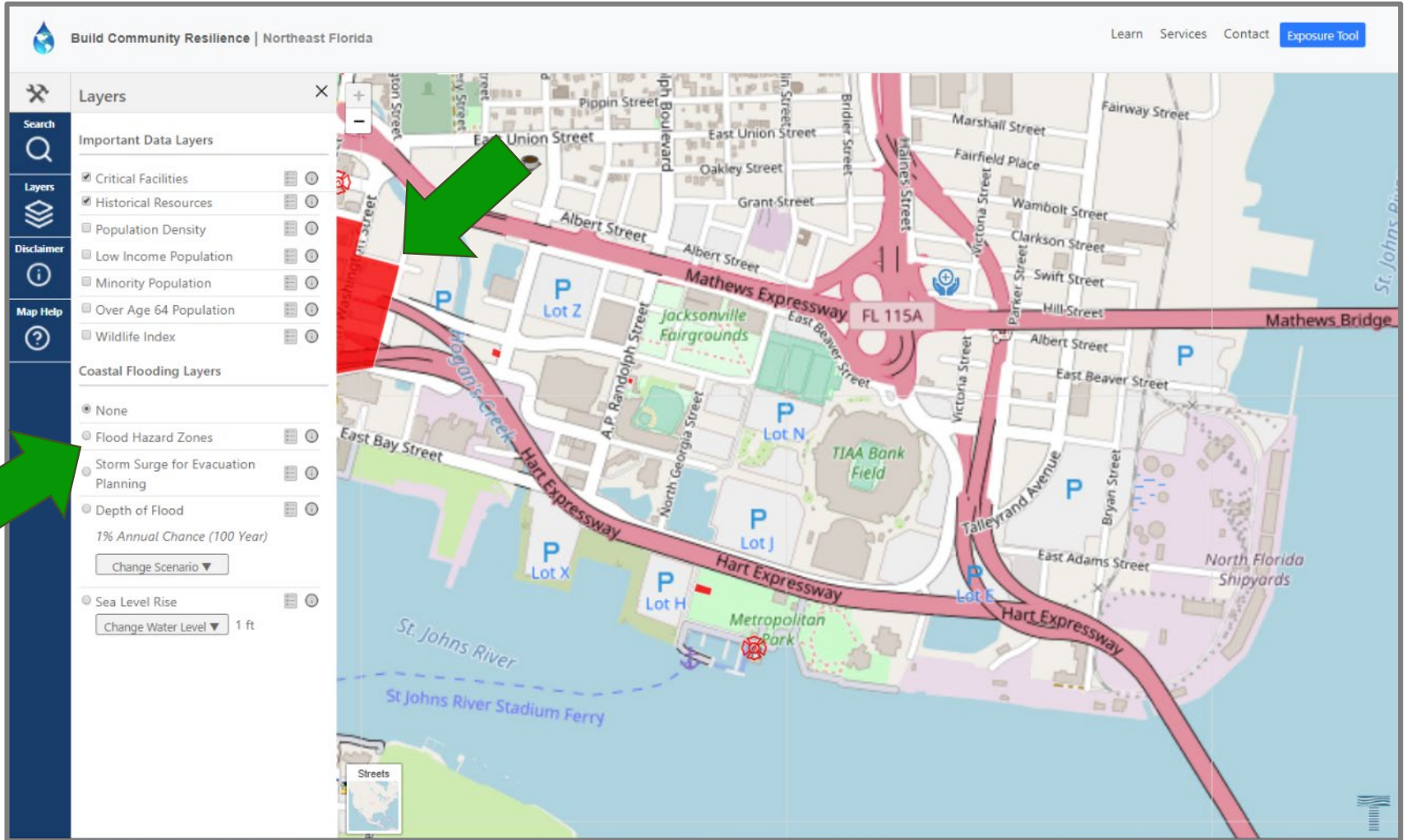
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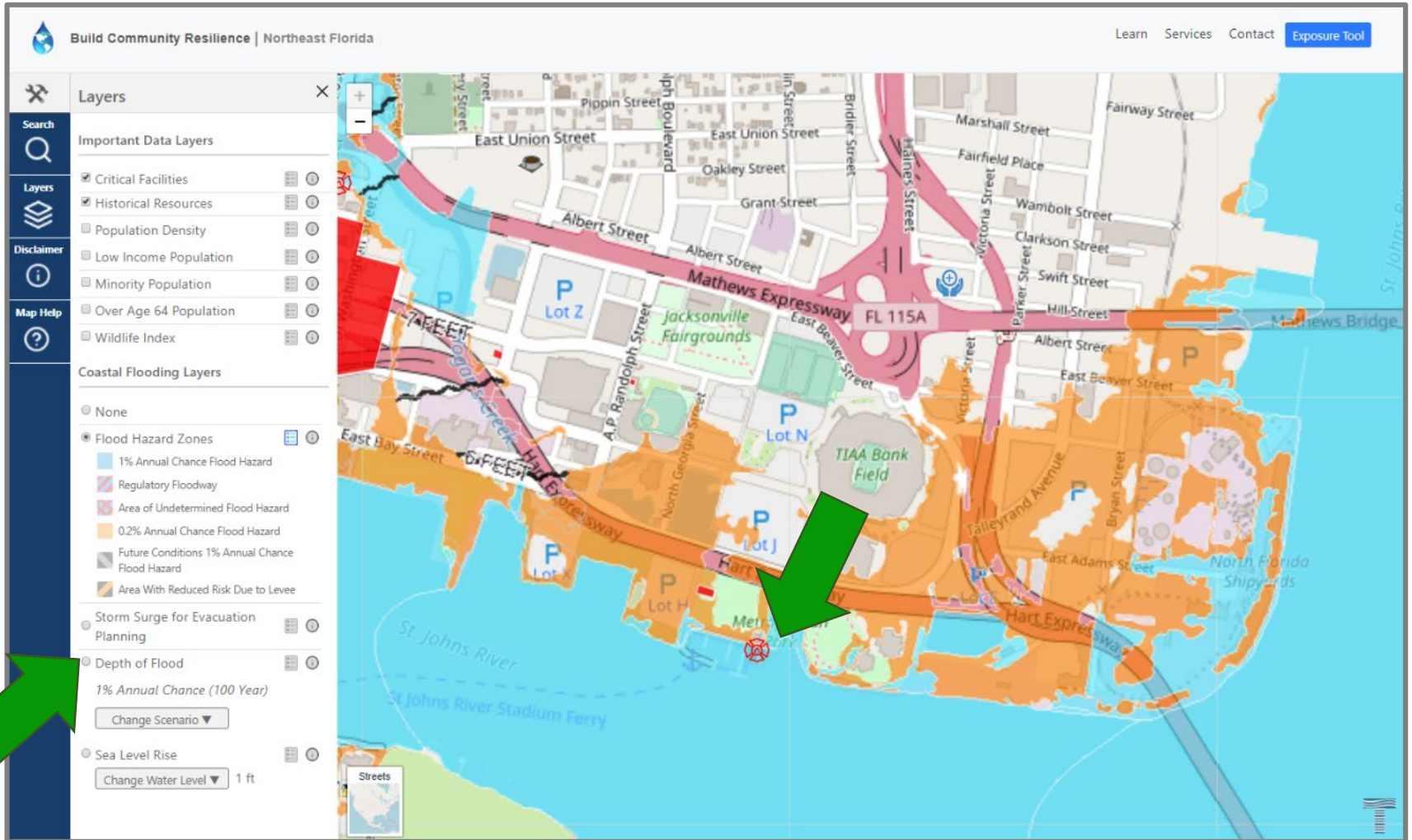
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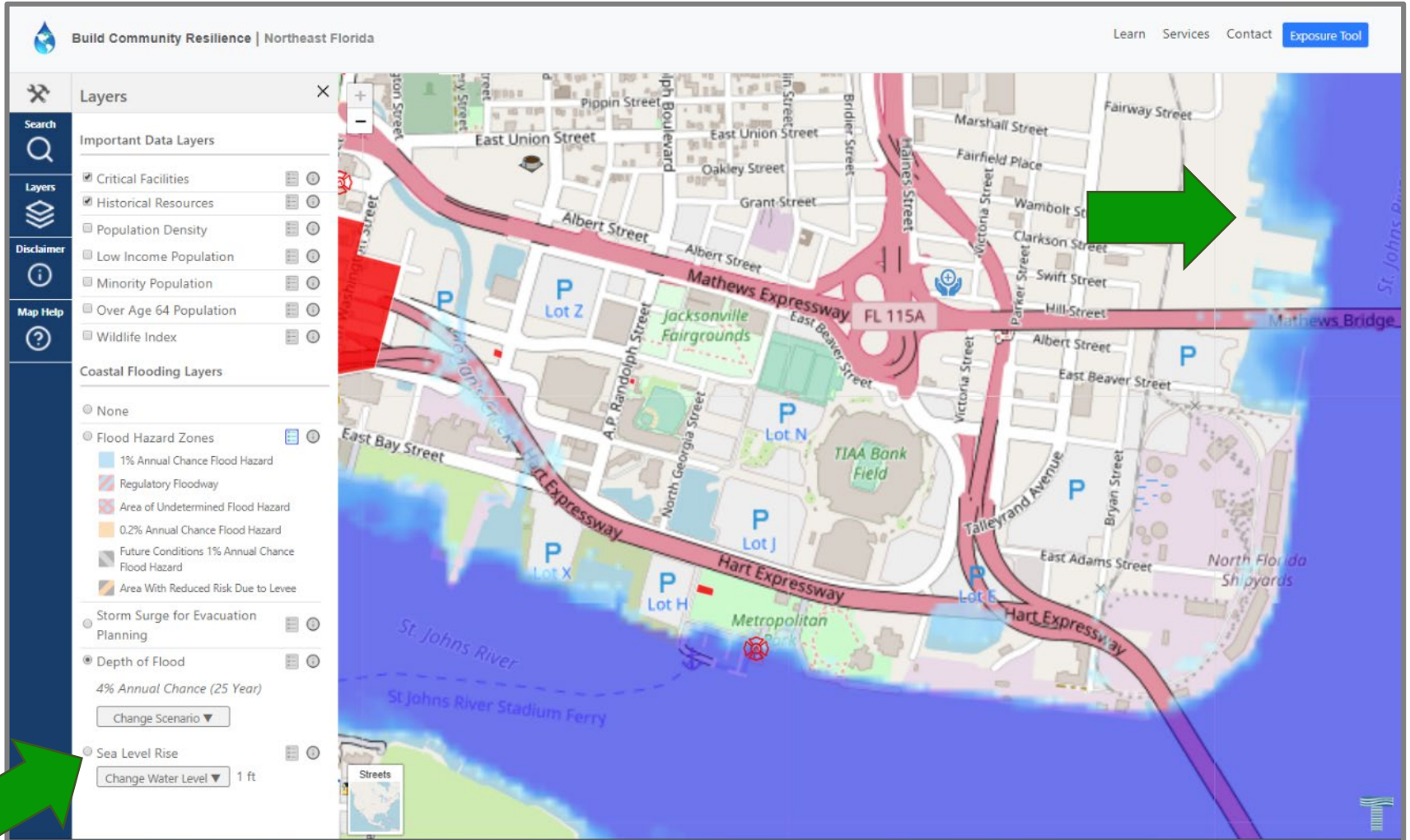
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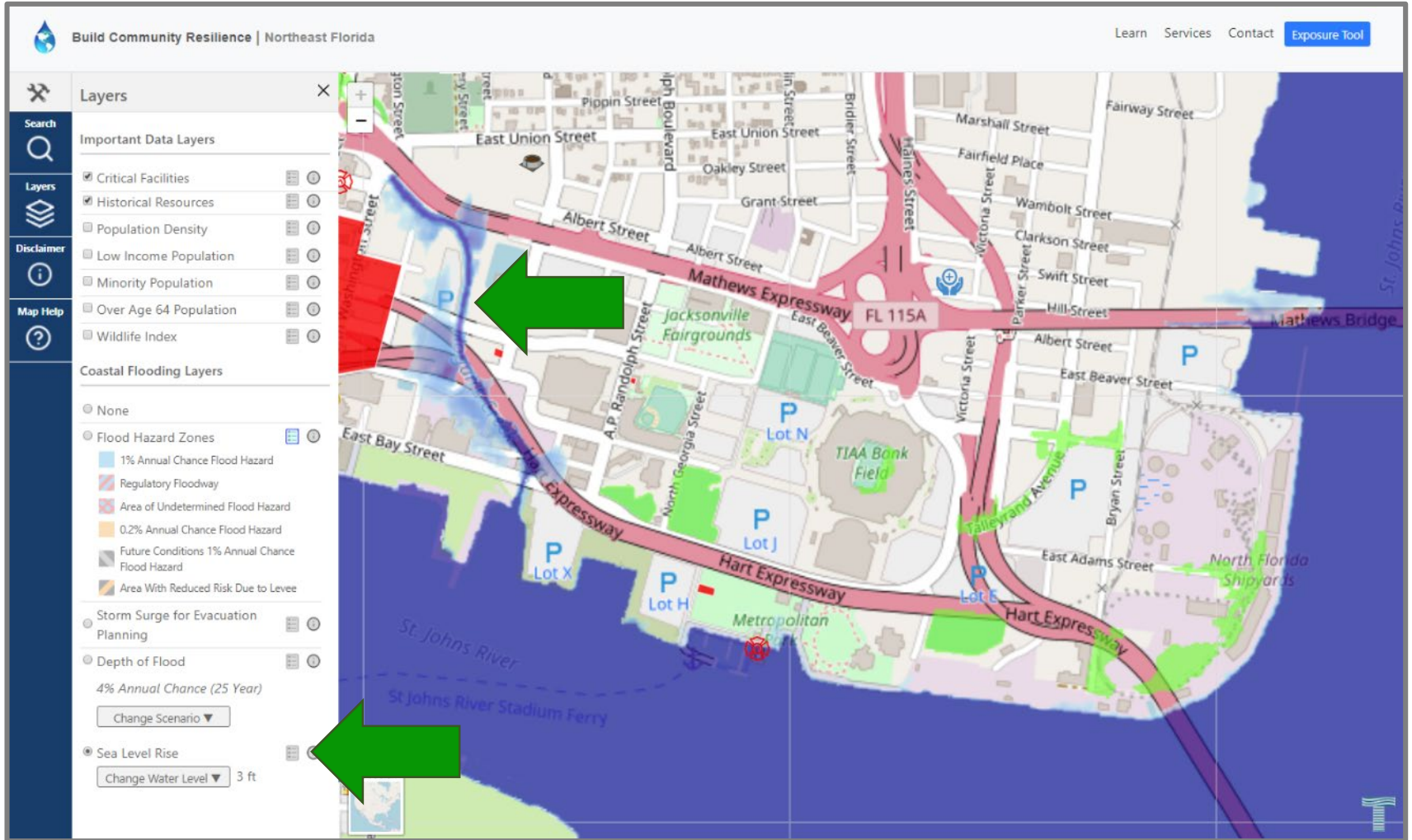
# Regional Resilience Exposure Tool (R2ET)



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# Regional Resilience Exposure Tool (R2ET)

**Build Community Resilience | Northeast Florida** Learn Services Contact [Exposure Tool](#)

**Layers**

**Important Data Layers**

- Critical Facilities
- Historical Resources
- Population Density
- Low Income Population
- Minority Population
- Over Age 64 Population
- Wildlife Index

**Coastal Flooding Layers**

- None
- Flood Hazard Zones
  - 1% Annual Chance Flood Hazard
  - Regulatory Floodway
  - Area of Undetermined Flood Hazard
  - 0.2% Annual Chance Flood Hazard
  - Future Conditions 1% Annual Chance Flood Hazard
  - Area With Reduced Risk Due to Levee
- Storm Surge for Evacuation Planning
- Depth of Flood
  - 4% Annual Chance (25 Year)
  - Change Scenario ▼
- Sea Level Rise
  - Change Water Level ▼ 3 ft

**Sea Level Rise**

Inundation Uncertainty Associated with Elevation Data and Tidal Datum Conversion for Current Mean Higher High Water

Note: Performance and speed of data in this layer are directly dependant on NOAA as the data is generated from a map service running on their website.

Description: This dataset was created as part of the National Oceanic and Atmospheric Administration Office for Coastal Management's efforts to create an online mapping viewer depicting potential sea level rise and its associated impacts on the nation's coastal areas. The purpose of the mapping viewer is to provide coastal managers and scientists with a preliminary look at sea level rise and coastal flooding impacts. The viewer is a screening-level tool that uses nationally consistent data sets and analyses. Data and maps provided can be used at several scales to help gauge trends and prioritize actions for different scenarios.

The purpose of this dataset is to depict errors that are directly related to elevation and water height data. These errors can be used to begin defining areas with mapped inundation that do not have the same level of confidence as other areas. For a detailed explanation of mapping methods, see [http://www.coast.noaa.gov/slr/assets/pdfs/Elevation\\_Mapping\\_Confidence\\_Methods.pdf](http://www.coast.noaa.gov/slr/assets/pdfs/Elevation_Mapping_Confidence_Methods.pdf).

# Resources





# Online Regional Resilience Survey

Resilient Northeast Florida

**WELCOME**

**Creating a Resilient Region**

Baker, Clay, Duval, Flagler, Nassau, Putnam, & St. Johns counties are vulnerable to a variety of natural hazards. Together we can turn challenges into opportunities for a thriving and resilient future.

**Begin**

**2 VULNERABILITIES**

**3 STRATEGIES**

**4 OPPORTUNITIES**

**5 THANK YOU**

Resilience is the ability to prepare and plan for, absorb, recover from, and more successfully adapt to adversity. Also the ability of a community to "bounce back" after hazardous events like hurricanes, storms, and flooding rather than reacting to impacts.

**NEFRC** NORTH EAST FLORIDA REGIONAL COUNCIL

# Online Regional Resilience Survey

WELCOME

VULNERABILITIES

Rank the Vulnerabilities

What to do Next Task

1 Sea Level Rise

2 Hurricanes & Storm Surge

3 Stormwater Drainage

Order your top 3 items above this line

Vulnerable Populations

Nuisance Flooding

Aging/Inadequate Infra.

Aging/Inadequate Infrastructure

Image credit: [tnews](#)

The vulnerabilities listed here are based on citizen input. Some may be more of a concern to you than others. Rank each vulnerability based on areas of most concern to you over the next 50-75 years

Comment

Suggest another

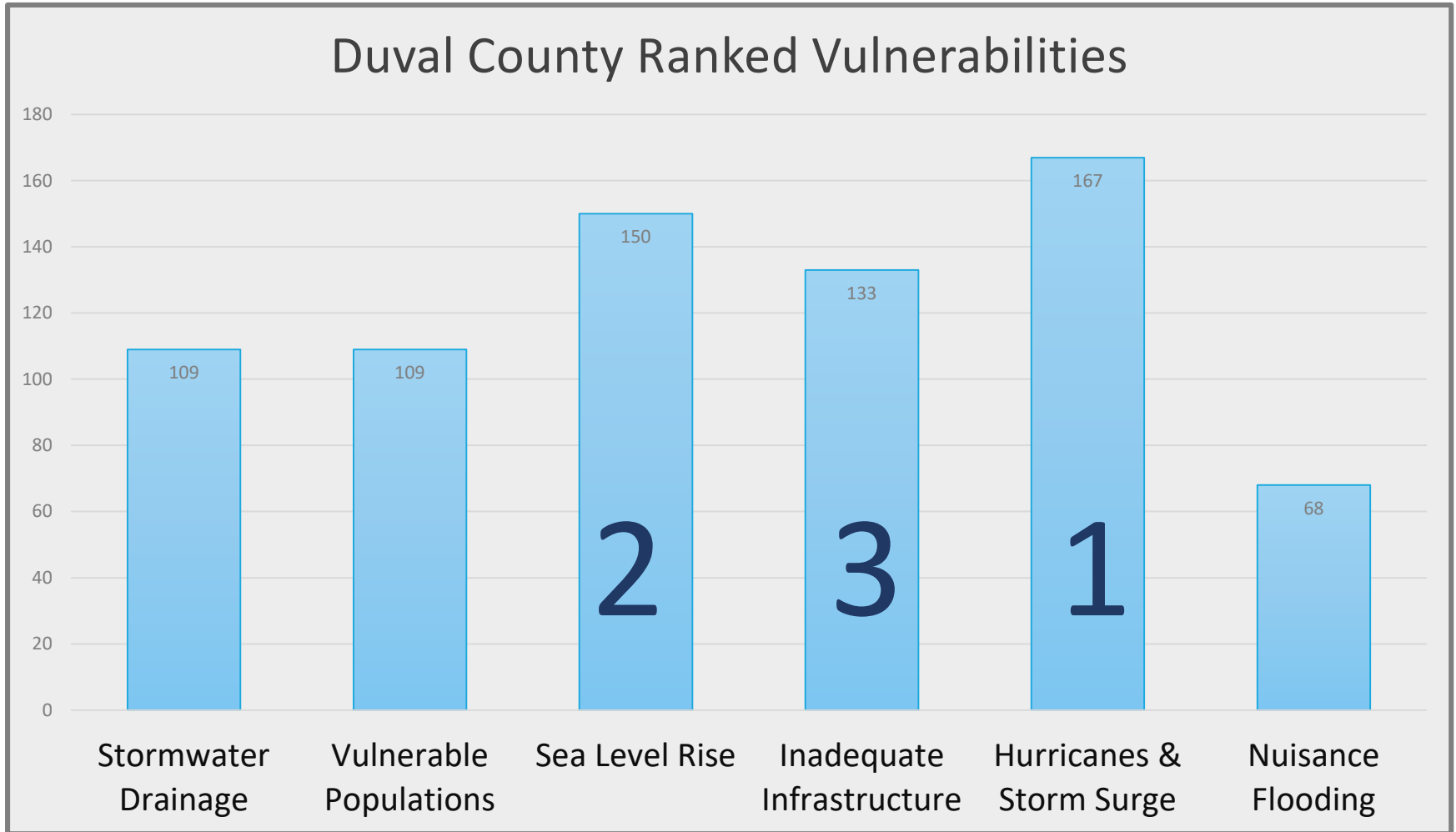
STRATEGIES

OPPORTUNITIES

THANK YOU

# Online Regional Resilience Survey



- Participants were asked to rank their top three vulnerabilities





# Online Regional Resilience Survey


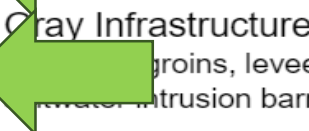
**3 Strategies** What to do Next Task

**STRATEGIES**


**Protect**   *Defensive measures to protect from erosion, wave damage, and tidal & storm surge flooding. Reduce impact while changing natural systems.*

**Accommodate** 

**Retreat** 

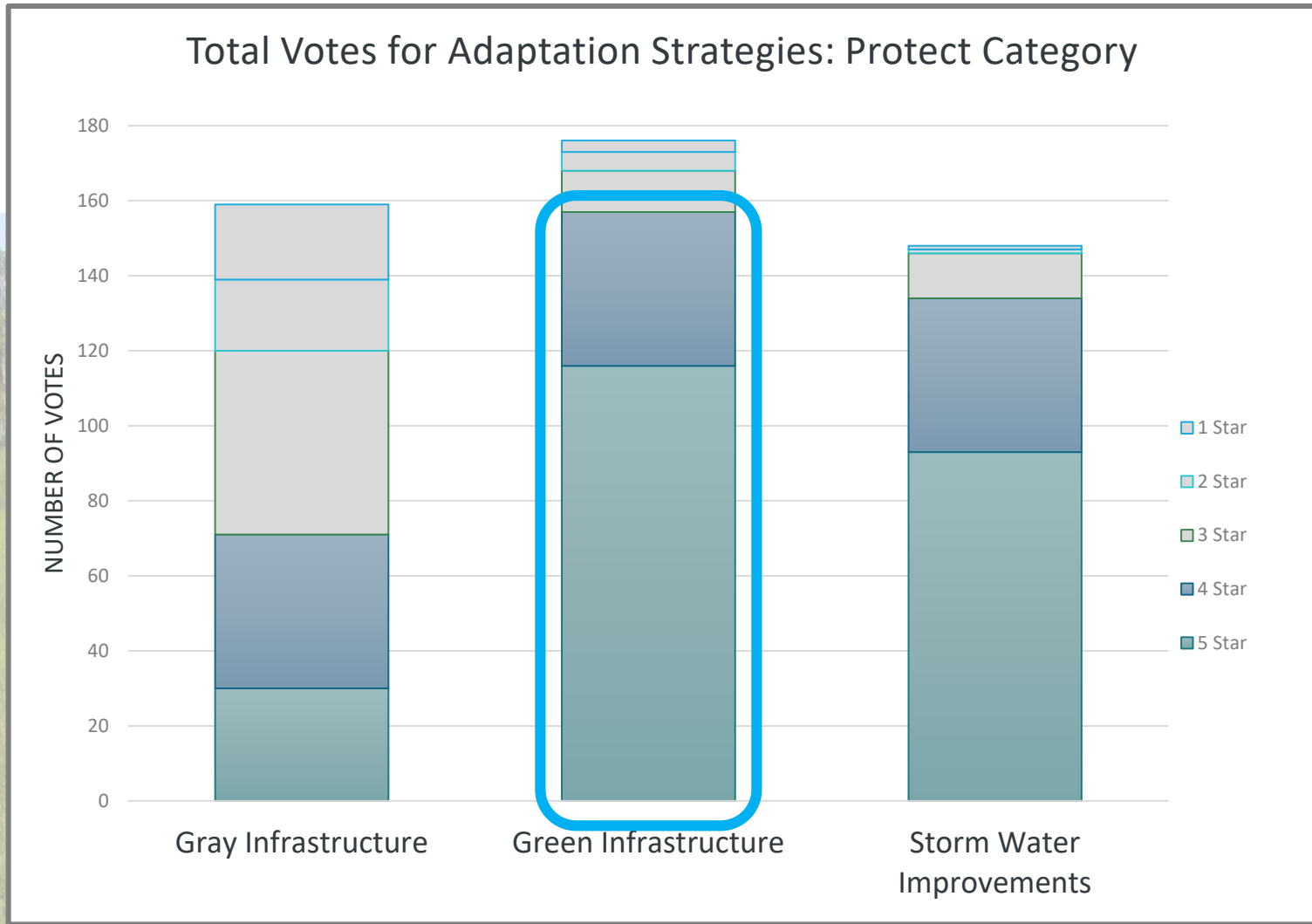
**Gray Infrastructure**   *Groins, levees, breakwaters, tidal & stormwater intrusion barriers* ★ ★ ★ ★ ★ Comment

**Green Infrastructure** *Wetland restoration, beach and dune nourishment, and living shorelines* ★ ★ ★ ★ ★ Comment

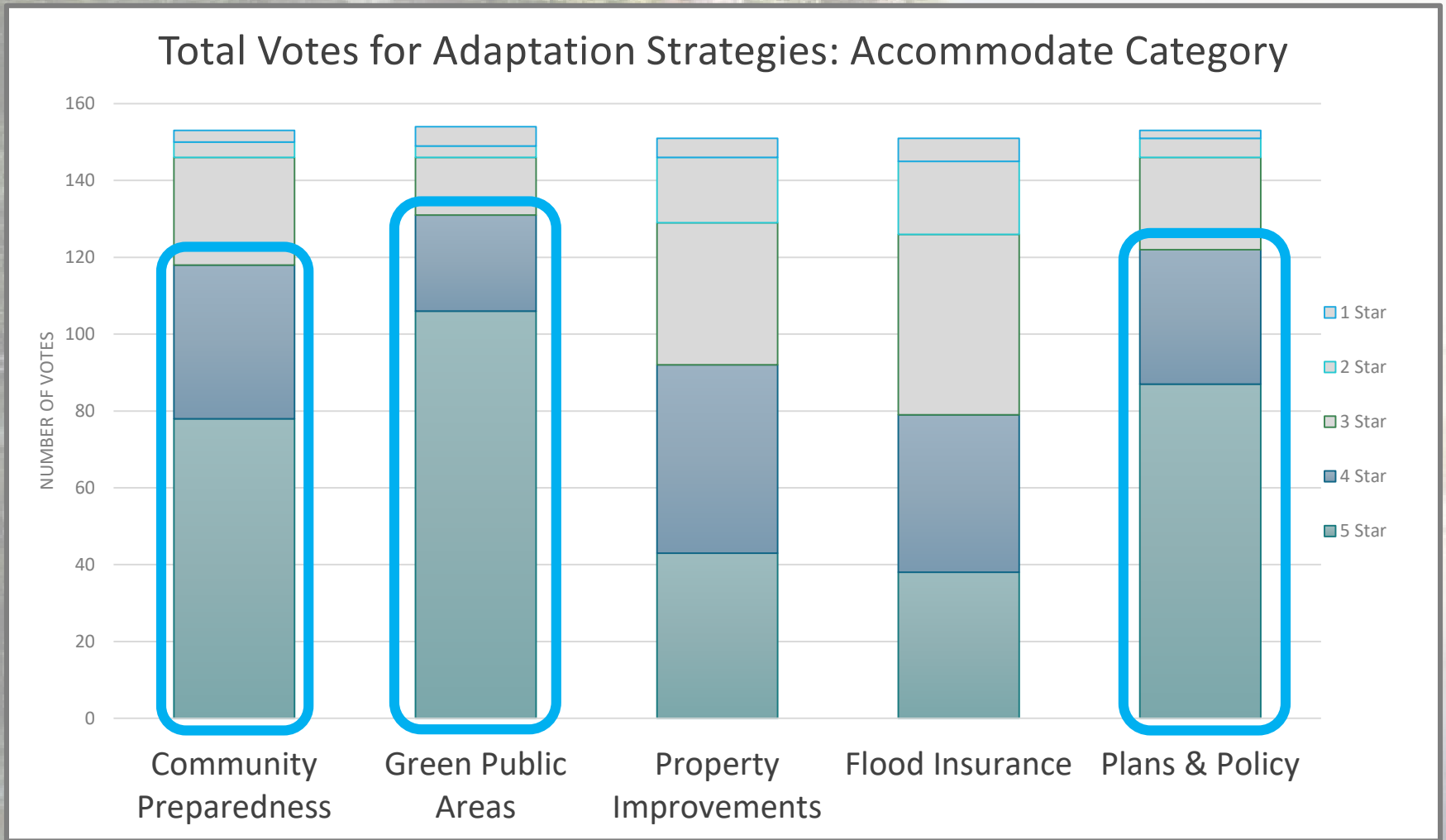
**Stormwater Improvements** *Enhance the maintenance & inspection of critical stormwater infrastructure* ★ ★ ★ ★ ★ Comment 

Suggest another Next Category

# Online Regional Resilience Survey

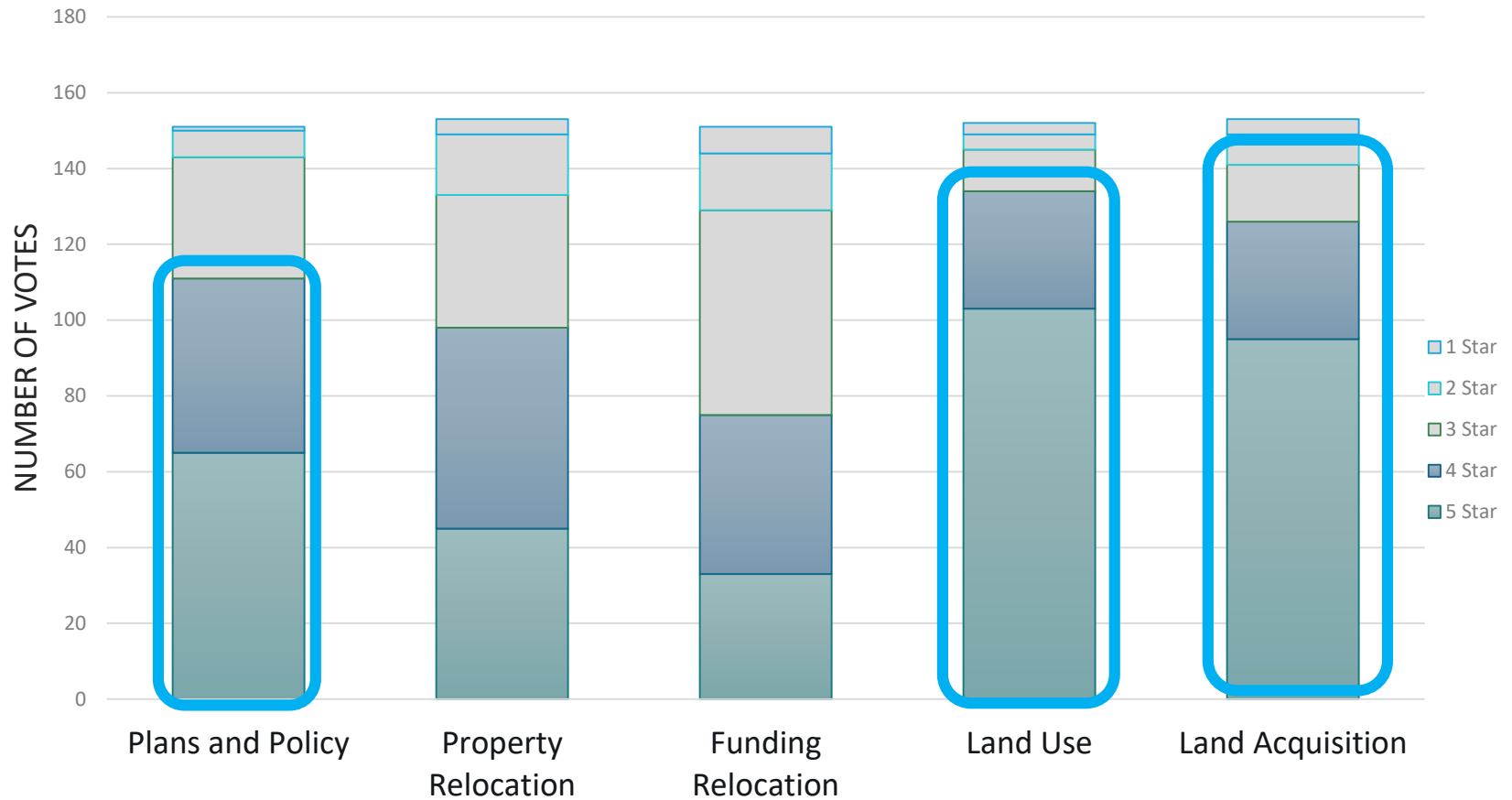


# Online Regional Resilience Survey



# Online Regional Resilience Survey

## Total Votes for Adaptation Strategies: Retreat Category



# Online Regional Resilience Survey

WELCOME

VULNERABILITIES

STRATEGIES

OPPORTUNITIES

What to do

Next Task

5

THANK YOU

## Opportunities

- 1 Conservation/Green Infra
- 2 Social Equity
- 3 Sustainable Development

Order your top 3 items above this line

Community Education

Business Resilience

Preserve Community

### Sustainable Development




Image credit: *Busch Systems*

Restrict development in designated floodplains or adaptation action areas. Encourage use of sustainable building materials and construction methods. Provide financial incentives for LEED certified buildings.

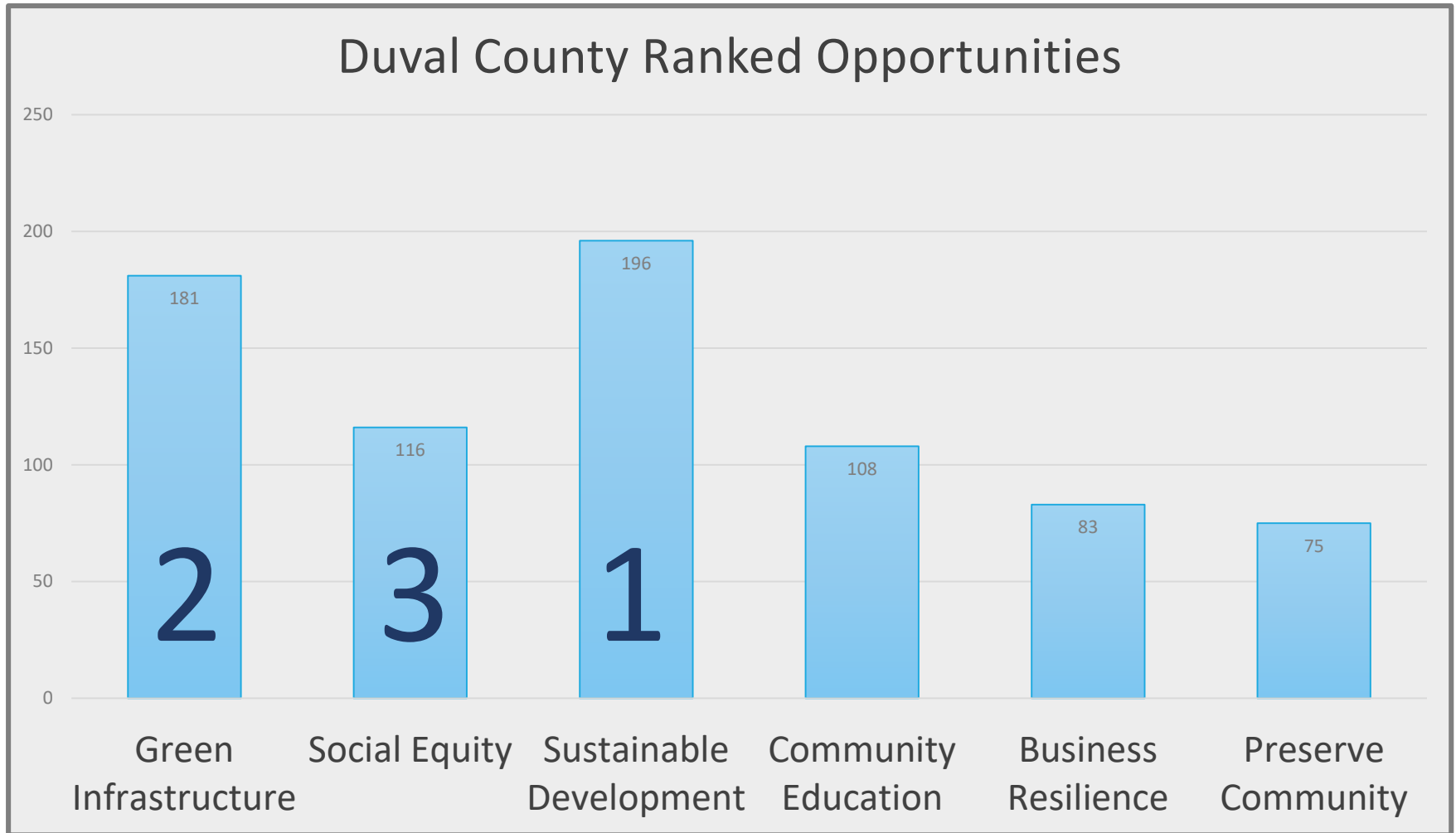
Comment

Suggest another



# Online Regional Resilience Survey

- Participants were asked to rank their top three opportunities



# Online Regional Resilience Survey

WELCOME

VULNERABILITIES

STRATEGIES

OPPORTUNITIES

5 Stay Involved

What to do

### Final Questions (Optional)

What is your zip code?  
 45

What NE FL neighborhood do you live in?  
 35

Age:

NE FL Residency:

Do you own a business in the region?

[ Question 6 ]

### Thank You!

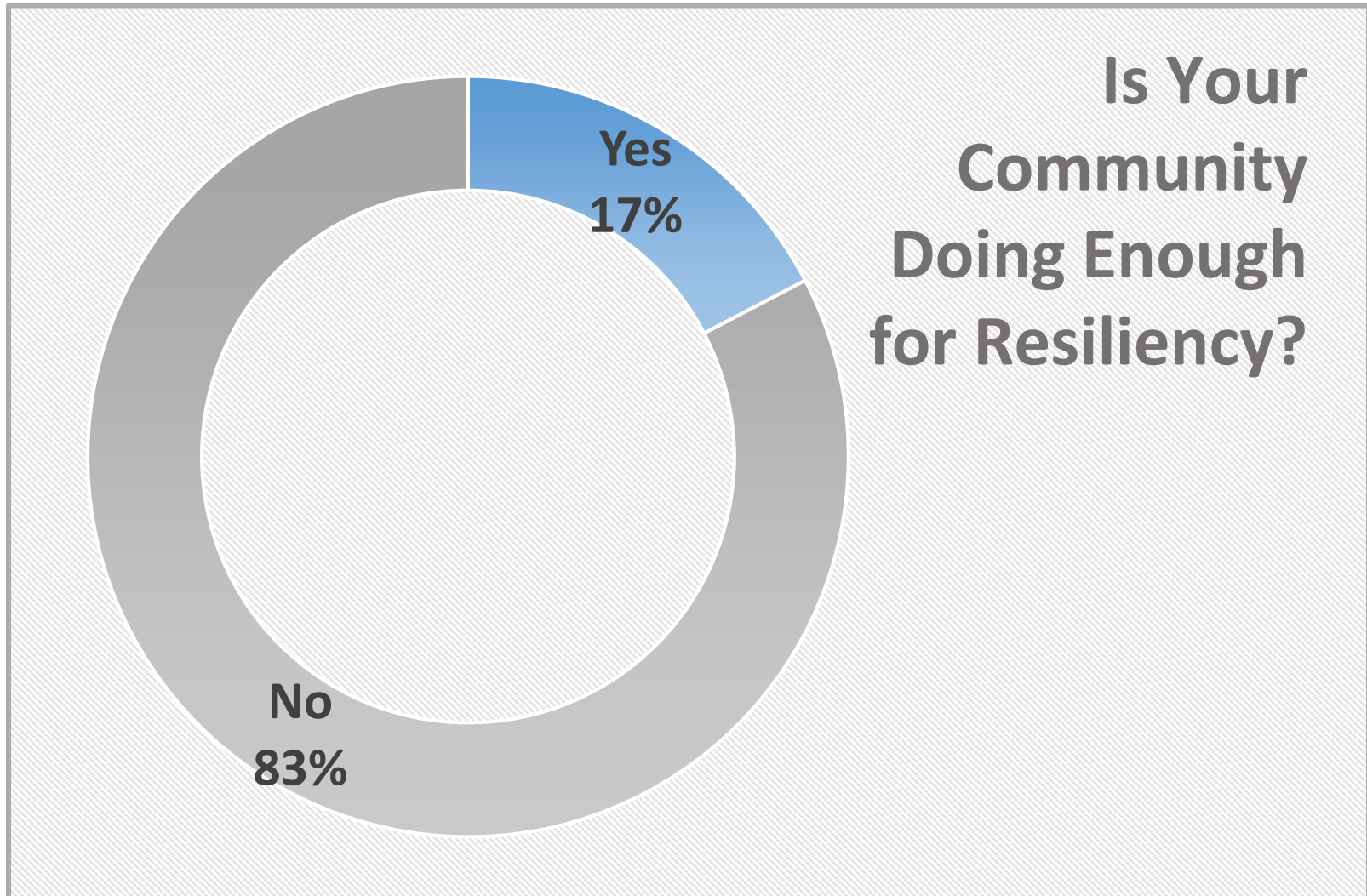
Your input will help the Northeast Florida Region plan for a more resilient future. For more information, visit:  
<https://www.nefrc.org/>



**NEFRC** NORTHEAST FLORIDA REGIONAL COUNCIL

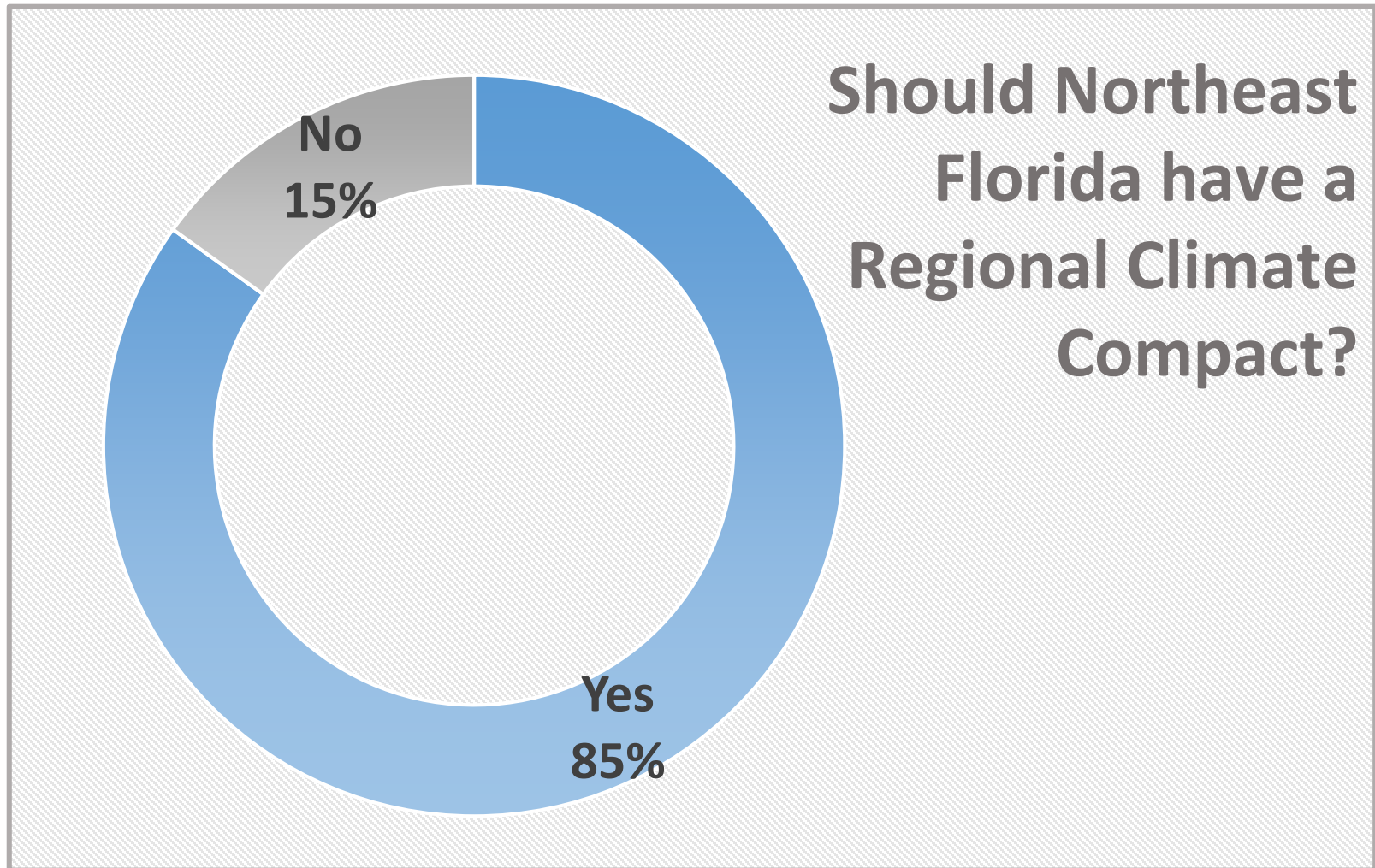
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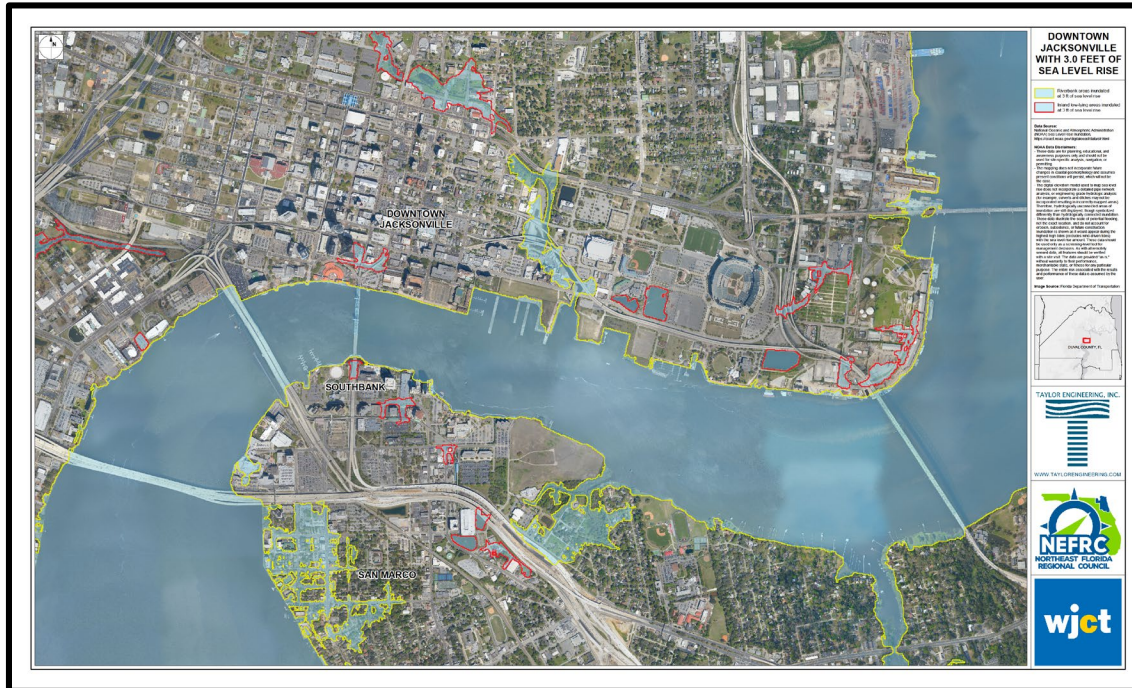
# Community Conversations



## Sinking Cities: A Community Discussion

- Jacksonville, FL
- PBS "Sinking Cities" documentary series
- Local public radio host
- Round table of experts

# Community Conversations



Large scale local maps with Sea Level Rise scenarios presented

- Personalization
- Interaction



# Community Conversations



Atlantic Beach, Jacksonville Beach and Neptune Beach share a threat- sea level rise. Find out how the State is supporting local efforts to protect our communities.

## Beaches Sea Level Rise Symposium

**Wednesday,  
June 19th  
6:00pm**

Duncan U. Fletcher High School  
700 Seagate Ave.  
Neptune Beach

Join us as we review our exposure, from both the natural and man-made environment perspective. Learn what communities are doing to address the issue and how they are funding these actions. Each coastal area will determine the best course of action for their community, and the Beaches will work together to mitigate the effects of sea level rise and maximize our efforts.

Learn how you can get involved and make a difference in your community.

Atlantic Beach  Jacksonville Beach  Neptune Beach

## Beaches Sea Level Rise Symposium

- Collaboration between three beach cities and mayors
- Presentations from experts in the field and from other coastal Florida cities that have tackled similar issues
- Educate the public and encourage community specific conversations that lead to action
- Share available resources

# Acknowledgements

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**NORTHEAST FLORIDA  
REGIONAL COUNCIL**



television  
radio  
digital  
**wjct.org**



**CITY OF  
Neptune Beach  
FLORIDA**





**THANK YOU**

[mvieira@taylorengeering.com](mailto:mvieira@taylorengeering.com)



**NORTHEAST FLORIDA  
REGIONAL COUNCIL**

